中国认可
检测
TESTING
CNAS L0748

230014349552

NO.1124030374

检 测 报 告

Test Report

样品名称： 锂离子电池组/二次鋰電池組 QV43 3.91V
4180mAh/16.35Wh(Rated) 4310mAh/16.86Wh(Typical)

Name of Sample: RECHARGEABLE LITHIUM ION BATTERY QV43 3.91V
4180mAh/16.35Wh(Rated) 4310mAh/16.86Wh(Typical)

委托单位: 东莞新能德科技有限公司

Consignor: Dongguan NVT Technology Co., Ltd.

上海化工院检测有限公司
检验检测专用章

上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.

上海化工院检测有限公司
检 测 报 告

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1124030374

样品名称 Name of Sample	中文 Chinese	锂离子电池组/二次鋰電池組 QV43 3.91V 4180mAh/16.35Wh(Rated) 4310mAh/16.86Wh(Typical)		
	英文 English	RECHARGEABLE LITHIUM ION BATTERY QV43 3.91V 4180mAh/16.35Wh(Rated) 4310mAh/16.86Wh(Typical)		
样品编号 Sample No.	1124030374			
委托单位 Consignor	东莞新能德科技有限公司 Dongguan NVT Technology Co., Ltd.			
生产单位 Manufacturer	东莞新能德科技有限公司 Dongguan NVT Technology Co., Ltd.			
检测方法 Test method	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3			
判定标准 Criterion	联合国《试验和标准手册》 ST/SG/AC.10/11/Rev.7&Amend.1 38.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3			
样品外观 Appearance	银色，黄色双色 铝塑外壳 Silvery and yellow Aluminum-plastics shell			
样品接受日期 Accepted Date	2024-03-13	检测起迄日期 Test Date	2024-03-20 ～ 2024-04-18	
检测项目 Test Items	高度模拟;热测试;振动;冲击;外短路;挤压;过充电;强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Overcharge, Forced discharge			
检测结论 Conclusion	经检测，该样品符合联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3标准要求。 The sample has passed the test items of UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 生效日期(Date)： 2024-04-19			
备注 Comment	可充电单电芯电池Rechargeable Single Cell Battery./			
委托单位地址 Consignor Address	/	邮政编码 Post Code	523443	

批准 Approver: 许勤　　审核 Checker: 陆建峰　　编制 Compiler: 傅俊

职务 Title: 电化学测试部部长(Head of Electrochemical Testing Department)

序号 No.	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	高度模拟 Altitude simulation	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.1	见附表 1 See Appendix 1	合格 Passed	/
2	热测试 Thermal test	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.2	见附表 2 See Appendix 2	合格 Passed	/
3	振动 Vibration	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.3	见附表 3 See Appendix 3	合格 Passed	/
4	冲击 Shock	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.4	见附表 4 See Appendix 4	合格 Passed	/
5	外短路 External short circuit	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.5	见附表 5 See Appendix 5	合格 Passed	/
6	挤压 Crush	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.6	见附表 6 See Appendix 6	合格 Passed	/
7	过充电 Overcharge	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.7 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.7	见附表 7 See Appendix 7	合格 Passed	/
8	强制放电 Forced discharge	联合国《试验和标准手册》ST/SG/AC.10/11/Rev.7&Amend.1 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7&Amend.1 Section 38.3 Test T.8	见附表 8 See Appendix 8	合格 Passed	/

检测环境条件 Test Environment Condition	环境温度:20℃-23℃;环境湿度:/% Ambient temperature:20℃-23℃;Ambient humidity:/%				
分包检验情况 Subcontracted Test Condition	检测项目 Test Item	/			
	分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code	/
		地址 Address	/	电话 Tel	/

上海化工院检测有限公司
检 测 报 告－附表1

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 1

NO. 1124030374

序号 No.	1	检测项目名称 Name of Test Items		高度模拟 Altitude simulation				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	56.9459	4.47	56.9446	4.47	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	56.9937	4.47	56.9884	4.47	0.01	100.00	O
003	1CYC完全充电 1CYC Fully charged	56.8603	4.48	56.8547	4.48	0.01	100.00	O
004	1CYC完全充电 1CYC Fully charged	57.0238	4.48	57.0222	4.48	0.00	100.00	O
005	1CYC完全充电 1CYC Fully charged	56.9222	4.47	56.9192	4.47	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	56.8509	4.48	56.8464	4.48	0.01	100.00	O
007	25CYC完全充电 25CYC Fully charged	56.9051	4.47	56.9034	4.47	0.00	100.00	O
008	25CYC完全充电 25CYC Fully charged	56.9367	4.47	56.9340	4.47	0.00	100.00	O
009	25CYC完全充电 25CYC Fully charged	56.9095	4.47	56.9056	4.47	0.01	100.00	O
010	25CYC完全充电 25CYC Fully charged	56.9509	4.47	56.9508	4.47	0.00	100.00	O
以下空白	This space intentionally left blank							

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表2

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 2

NO. 1124030374

序号 No.	2	检测项目名称 Name of Test Items		热测试 Thermal test				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	56.9446	4.47	56.9415	4.40	0.01	98.43	O
002	1CYC完全充电 1CYC Fully charged	56.9884	4.47	56.9899	4.41	0.00	98.66	O
003	1CYC完全充电 1CYC Fully charged	56.8547	4.48	56.8572	4.41	0.00	98.44	O
004	1CYC完全充电 1CYC Fully charged	57.0222	4.48	57.0204	4.41	0.00	98.44	O
005	1CYC完全充电 1CYC Fully charged	56.9192	4.47	56.9189	4.40	0.00	98.43	O
006	25CYC完全充电 25CYC Fully charged	56.8464	4.48	56.8468	4.41	0.00	98.44	O
007	25CYC完全充电 25CYC Fully charged	56.9034	4.47	56.9013	4.40	0.00	98.43	O
008	25CYC完全充电 25CYC Fully charged	56.9340	4.47	56.9337	4.40	0.00	98.43	O
009	25CYC完全充电 25CYC Fully charged	56.9056	4.47	56.9062	4.41	0.00	98.66	O
010	25CYC完全充电 25CYC Fully charged	56.9508	4.47	56.9478	4.40	0.01	98.43	O
以下空白	This space intentionally left blank							

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表3

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 3

NO. 1124030374

序号 No.	3	检测项目名称 Name of Test Items		振动 Vibration				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	56.9415	4.40	56.9538	4.40	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	56.9899	4.41	57.0019	4.40	0.00	99.77	O
003	1CYC完全充电 1CYC Fully charged	56.8572	4.41	56.8688	4.40	0.00	99.77	O
004	1CYC完全充电 1CYC Fully charged	57.0204	4.41	57.0324	4.40	0.00	99.77	O
005	1CYC完全充电 1CYC Fully charged	56.9189	4.40	56.9298	4.40	0.00	100.00	O
006	25CYC完全充电 25CYC Fully charged	56.8468	4.41	56.8595	4.40	0.00	99.77	O
007	25CYC完全充电 25CYC Fully charged	56.9013	4.40	56.9136	4.40	0.00	100.00	O
008	25CYC完全充电 25CYC Fully charged	56.9337	4.40	56.9444	4.40	0.00	100.00	O
009	25CYC完全充电 25CYC Fully charged	56.9062	4.41	56.9167	4.40	0.00	99.77	O
010	25CYC完全充电 25CYC Fully charged	56.9478	4.40	56.9591	4.40	0.00	100.00	O
以下空白	This space intentionally left blank							

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表4

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 4

NO. 1124030374

序号 No.	4	检测项目名称 Name of Test Items		冲击 Shock				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	1CYC完全充电 1CYC Fully charged	56.9538	4.40	56.9535	4.40	0.00	100.00	O
002	1CYC完全充电 1CYC Fully charged	57.0019	4.40	56.9988	4.40	0.01	100.00	O
003	1CYC完全充电 1CYC Fully charged	56.8688	4.40	56.8648	4.40	0.01	100.00	O
004	1CYC完全充电 1CYC Fully charged	57.0324	4.40	57.0268	4.40	0.01	100.00	O
005	1CYC完全充电 1CYC Fully charged	56.9298	4.40	56.9267	4.40	0.01	100.00	O
006	25CYC完全充电 25CYC Fully charged	56.8595	4.40	56.8551	4.40	0.01	100.00	O
007	25CYC完全充电 25CYC Fully charged	56.9136	4.40	56.9105	4.40	0.01	100.00	O
008	25CYC完全充电 25CYC Fully charged	56.9444	4.40	56.9428	4.40	0.00	100.00	O
009	25CYC完全充电 25CYC Fully charged	56.9167	4.40	56.9156	4.40	0.00	100.00	O
010	25CYC完全充电 25CYC Fully charged	56.9591	4.40	56.9560	4.40	0.01	100.00	O
以下空白	This space intentionally left blank							

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表5

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 5

NO. 1124030374

序号 No.	5	检测项目名称 Name of Test Items	外短路 External short circuit
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /℃	其他现象 Other Event
001	1CYC完全充电 1CYC Fully charged	57.0	O
002	1CYC完全充电 1CYC Fully charged	56.7	O
003	1CYC完全充电 1CYC Fully charged	56.5	O
004	1CYC完全充电 1CYC Fully charged	56.6	O
005	1CYC完全充电 1CYC Fully charged	56.8	O
006	25CYC完全充电 25CYC Fully charged	56.8	O
007	25CYC完全充电 25CYC Fully charged	57.8	O
008	25CYC完全充电 25CYC Fully charged	57.7	O
009	25CYC完全充电 25CYC Fully charged	57.5	O
010	25CYC完全充电 25CYC Fully charged	56.9	O
以下空白	This space intentionally left blank		

备注：D-解体 R-破裂 F-起火 O-无解体、无起火、无破裂。
Note: D-Disassembly R-Ruptur F-Fire O-No Disassembly,No Fire & No Rupture.

序号 No.	6	检测项目名称 Name of Test Items	挤压 Crush
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /℃	其他现象 Other Event
011	1CYC 50%容量 1CYC 50% Capacity	21.4	O
012	1CYC 50%容量 1CYC 50% Capacity	22.0	O
013	1CYC 50%容量 1CYC 50% Capacity	21.4	O
014	1CYC 50%容量 1CYC 50% Capacity	21.9	O
015	1CYC 50%容量 1CYC 50% Capacity	21.7	O
016	25CYC 50%容量 25CYC 50% Capacity	22.0	O
017	25CYC 50%容量 25CYC 50% Capacity	21.9	O
018	25CYC 50%容量 25CYC 50% Capacity	21.7	O
019	25CYC 50%容量 25CYC 50% Capacity	21.2	O
020	25CYC 50%容量 25CYC 50% Capacity	22.2	O
以下空白	This space intentionally left blank		

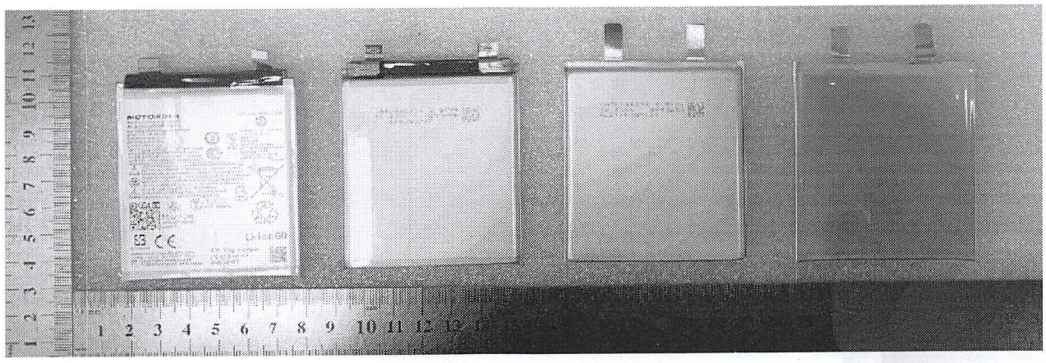
备注：D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

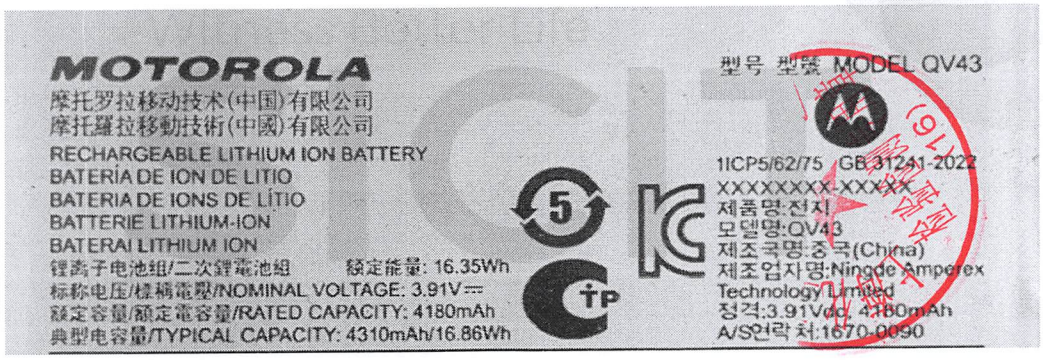
序号 No.	7	检测项目名称 Name of Test Items	过充电 Overcharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
021	1CYC完全充电 1CYC Fully charged	O	
022	1CYC完全充电 1CYC Fully charged	O	
023	1CYC完全充电 1CYC Fully charged	O	
024	1CYC完全充电 1CYC Fully charged	O	
025	25CYC完全充电 25CYC Fully charged	O	
026	25CYC完全充电 25CYC Fully charged	O	
027	25CYC完全充电 25CYC Fully charged	O	
028	25CYC完全充电 25CYC Fully charged	O	
以下空白	This space intentionally left blank		

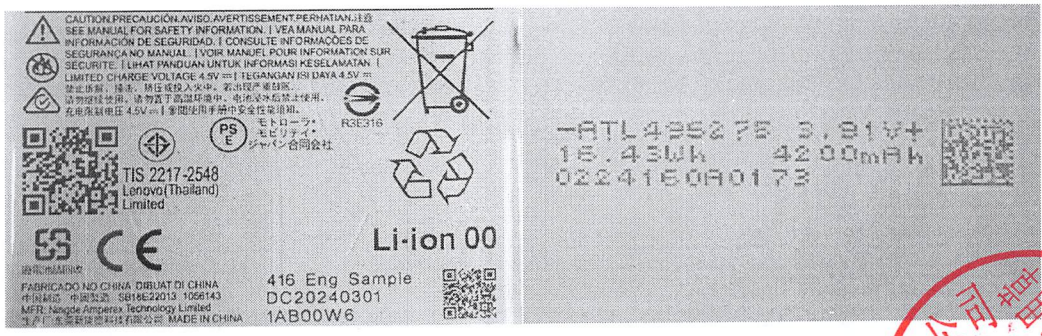
备注：D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

序号 No.	8	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
029	1CYC完全放电 1CYC Fully discharged	O	
030	1CYC完全放电 1CYC Fully discharged	O	
031	1CYC完全放电 1CYC Fully discharged	O	
032	1CYC完全放电 1CYC Fully discharged	O	
033	1CYC完全放电 1CYC Fully discharged	O	
034	1CYC完全放电 1CYC Fully discharged	O	
035	1CYC完全放电 1CYC Fully discharged	O	
036	1CYC完全放电 1CYC Fully discharged	O	
037	1CYC完全放电 1CYC Fully discharged	O	
038	1CYC完全放电 1CYC Fully discharged	O	
039	25CYC完全放电 25CYC Fully discharged	O	
040	25CYC完全放电 25CYC Fully discharged	O	
041	25CYC完全放电 25CYC Fully discharged	O	
042	25CYC完全放电 25CYC Fully discharged	O	
043	25CYC完全放电 25CYC Fully discharged	O	
044	25CYC完全放电 25CYC Fully discharged	O	
045	25CYC完全放电 25CYC Fully discharged	O	
046	25CYC完全放电 25CYC Fully discharged	O	
047	25CYC完全放电 25CYC Fully discharged	O	
048	25CYC完全放电 25CYC Fully discharged	O	

备注：D-解体 F-起火 0-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.




MOTOROLA
摩托罗拉移动技术(中国)有限公司
摩托羅拉移動技術(中國)有限公司
RECHARGEABLE LITHIUM ION BATTERY
BATERÍA DE ION DE LITIO
BATERIA DE IONS DE LÍTIO
BATTERIE LITHIUM-ION
BATERAI LITHIUM ION
锂离子电池组/二次锂電池組
额定能量: 16.35Wh
标称电压/標稱電壓/NOMINAL VOLTAGE: 3.91V ⎓
额定容量/額定電容量/RATED CAPACITY: 4180mAh
典型电容量/TYPICAL CAPACITY: 4310mAh/16.86Wh
型号 型號 MODEL QV43
1ICP5/62/75 GB 31241-2022
XXXXXXXX-XXXXX
제품명:전지
모델명:QV43
제조국명:중국(China)
제조업자명:Ningde Amperex Technology Limited
정격:3.91Vdc, 4180mAh
A/S연락 처:1670-0090


CAUTION.PRECAUCIÓN.AVISO.AVERTISSEMENT.PERHATIAN.注意
SEE MANUAL FOR SAFETY INFORMATION. | VEA MANUAL PARA INFORMACIÓN DE SEGURIDAD. | CONSULTE INFORMAÇÕES DE SEGURANÇA NO MANUAL. | VOIR MANUEL POUR INFORMATION SUR SÉCURITÉ. | LIHAT PANDUAN UNTUK INFORMASI KESELAMATAN. |
LIMITED CHARGE VOLTAGE 4.5V ⎓ | TEGANGAN ISI DAYA 4.5V ⎓
R3E316
TIS 2217-2548
Lenovo(Thailand) Limited
Li-ion 00
FABRICADO NO CHINA DIBUAT DI CHINA
MFR: Ningde Amperex Technology Limited
MADE IN CHINA
416 Eng Sample
DC20240301
1AB00W6
-ATL4952 78 3.91V+
16.43Wh 4200mAh
022416 0A0173

报告结束